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January 1965

PHOTOGRAPHIC INTERPRETATION REPORT

PROBABLE SOLID PROPELLANTS TEST FACILITY AND ASSOCIATED PRODUCTION FACILITIES, KRASNOYARSK, USSR

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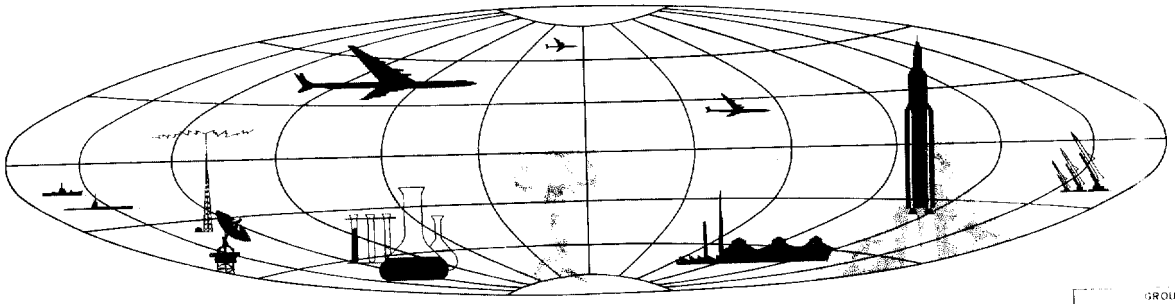
NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER



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PROBABLE SOLID PROPELLANTS TEST FACILITY AND ASSOCIATED PRODUCTION FACILITIES, KRASNOYARSK, USSR

INTRODUCTION

The purpose of this report is to present descriptions of a probable solid propellants test facility and of an adjacent probable solid propellants production area, both of which are parts of a pre-existing explosives manufacturing complex on the eastern edge of Krasnoyarsk, USSR (Figure 1).

The Krasnoyarsk Probable Solid Propellants Test Facility is situated at 56-02N 93-03E, about 5 nm east of the Krasnoyarsk Airfield. About 3,000 feet to the south of the test facility is the probable solid propellants production area which is the northernmost component of Explosives Plant Zlobino [redacted] 25X1A

[redacted] Other components of this explosives plant are a probable double-base propellants processing area, a shell-testing facility, probable nitrocellulose and nitroglycerin sections, and a small separately secured storage area which is apparently part of the probable solid propellants test area (Figure 3). Industrial installations in the vicinity of the explosives plant that may have functions related to the production of solid propellants include a wood products plant (which has alcohol and cellulose producing sections), a probable synthetic fiber plant, an arms plants, a probable synthetic rubber plant, and a possible heavy chemicals plant.

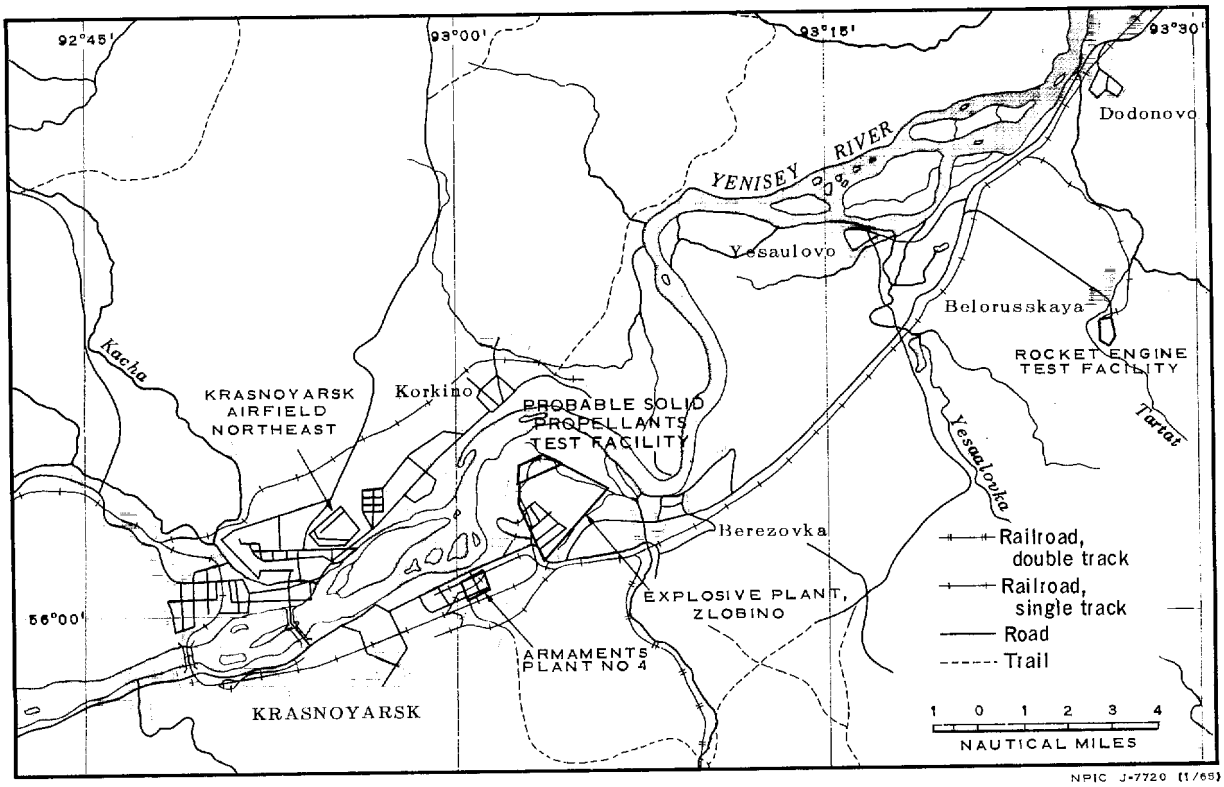

FIGURE 1. LOCATION MAP.

THE PROBABLE SOLID PROPELLANTS TEST FACILITY

The Krasnoyarsk Probable Solid Propellants Test Facility (Figures 3 and 4) occupies an area measuring approximately 2,500 by 1,000 feet. It is secured by a double fence, the inner fence being of solid construction. Rail spurs that serve the adjacent suspect solid propellants production area may extend to the test facility.

Contained within the secured area of the test facility are the following structures: two test cells (items 1 and 2, Figure 3) and their associated blast deflectors, an H-shaped building (item 3), two other relatively large structures (items 4 and 5), a revetted building apparently connected to the smaller test cell by a duct or pipeline, and several small structures. Dimensions of the principal structures and the chronology of their construction are presented on Figure 3, and a perspective drawing of the test facility is presented on Figure 5.

A separately fenced storage area containing four small structures is located just outside the northwestern corner of the test facility. Revetments, first seen in [redacted] enclose two of the structures which may be either small buildings or tanks (Figures 2, 3, and 4). The nature of these structures and their position adjacent to the test facility suggest that they may be used to house sensitive rocket components such as igniters.

When first seen on photography of [redacted] the test facility was in an early or mid stage of construction. At that time the blast deflector of Test Cell 2 was under construction, 2 wings of the H-shaped building were complete, and 3 support buildings were present. By [redacted] Test Cell 2 had been completed and 4 sections of the H-shaped building could be discerned. Photography of [redacted] revealed that Test Cell 1 and the H-shaped building had been completed and that one support building had been added. No changes were observed in [redacted] but the test area facilities appeared to be essentially complete in [redacted] revealed an additional support building. No new information was obtained from poor coverage of [redacted] revealed a group of 3 offset buildings south of the test facility (item 7, Figure 3). A second group of offset buildings (item 6) under construction was seen in [redacted] This group was nearly complete in [redacted] and four small structures, 2 of which were revetted, were seen immediately northwest of the test facility (Storage Area, Figure 3). [redacted] both groups of offset buildings were apparently complete, and a ditch for an underground steamline was visible. This steamline will serve both groups of offset buildings.

This test facility appears to have been designed to test relatively small quantities of propellants or small-to-medium size rocket motors. Large solid propellant rocket motors could be tested at the Krasnoyarsk Rocket Engine Test Facility which is 21 nautical miles northeast of the city (Figure 1). Additional structures were observed at the latter facility, beginning in [redacted] that may have been built for solid rocket motor test purposes. 1/ 2/

THE PROBABLE SOLID PROPELLANTS PRODUCTION AREA

The probable solid propellants production area constitutes the northern sector of Explosives Plant Zlobino and is included within the fenced area of the plant (Figures 2, 3, and 4).

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FIGURE 2. KRASNOYARSK PROBABLE SOLID PROPELLANTS TEST FACILITY AND ASSOCIATED PRODUCTION FACILITIES,

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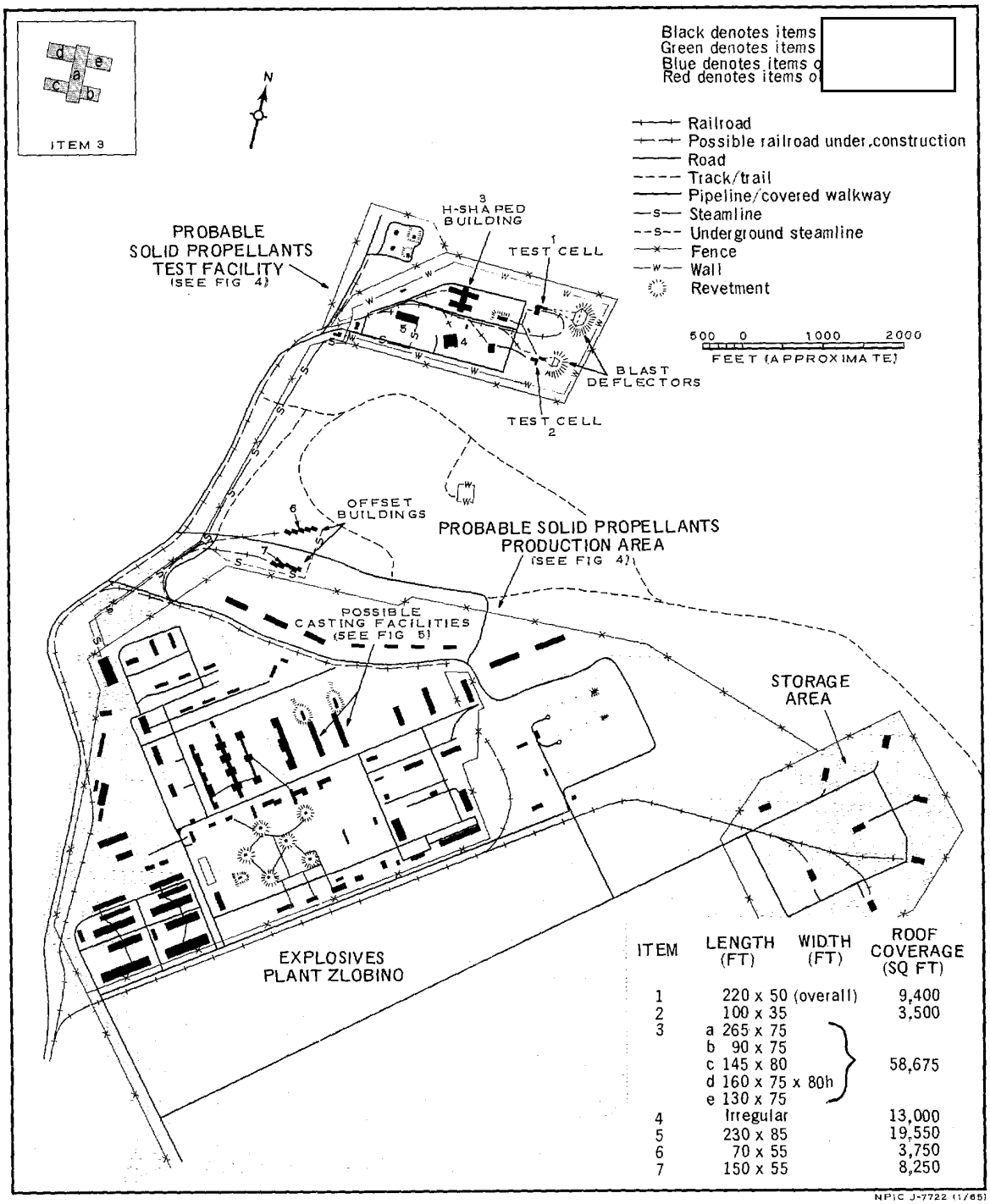

ITEM	LENGTH (FT)	WIDTH (FT)	ROOF COVERAGE (SQ FT)
1	220 x 50 (overall)		9,400
2	100 x 35		3,500
3	a 265 x 75		
	b 90 x 75		
	c 145 x 80		58,675
	d 160 x 75 x 80h		
	e 130 x 75		
4	Irregular		13,000
5	230 x 85		19,550
6	70 x 55		3,750
7	150 x 55		8,250

FIGURE 3. LAYOUT OF THE PROBABLE SOLID PROPELLANTS TEST FACILITY AND THE PROBABLE SOLID PROPELLANTS PRODUCTION AREA, KRASNOYARSK, USSR.

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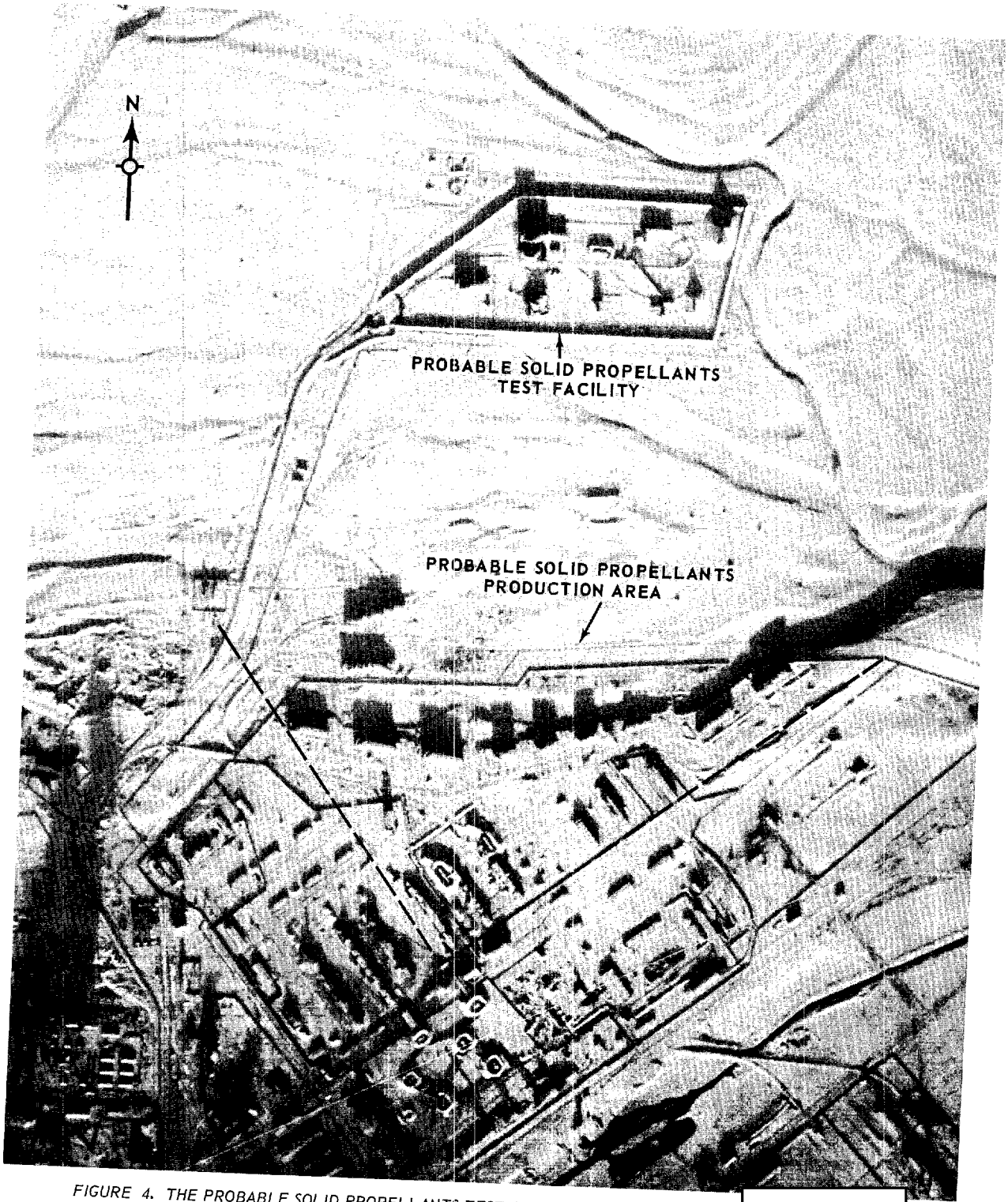

FIGURE 4. THE PROBABLE SOLID PROPELLANTS TEST AND PRODUCTION FACILITIES

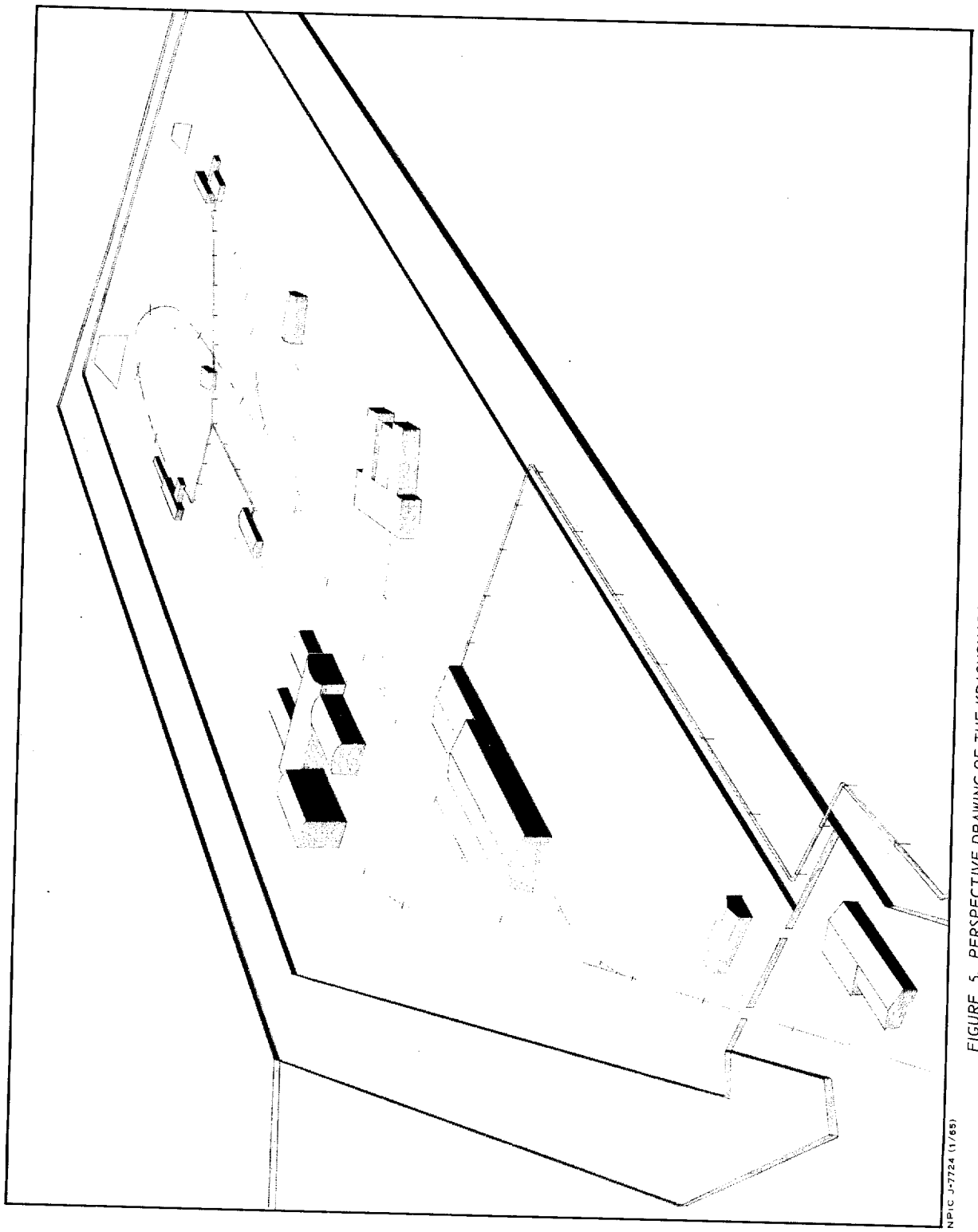

FIGURE 5. PERSPECTIVE DRAWING OF THE KRASNOYARSK PROBABLE SOLID PROPELLANTS TEST FACILTY.

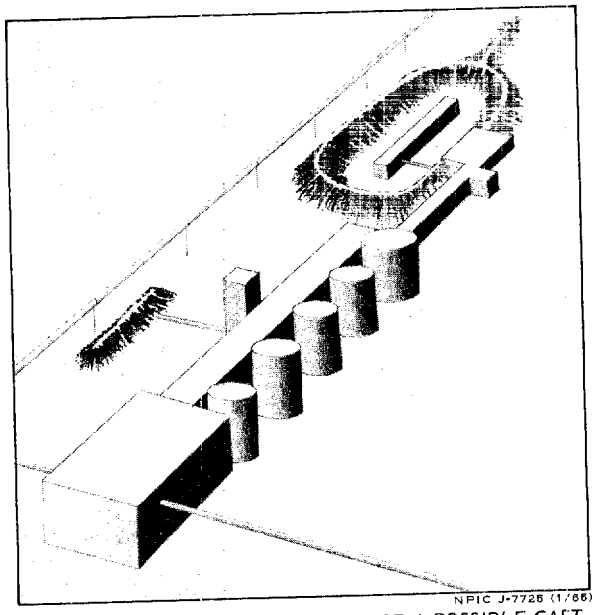

FIGURE 6. PERSPECTIVE DRAWING OF A POSSIBLE CASTING FACILITY IN THE PROBABLE SOLID PROPELLANTS PRODUCTION AREA.

It contains 19 structures. Of primary interest are two possible casting facilities (Figure 3). Each facility consists of a long irregularly shaped structure flanked by 5 or more connected cylindrical structures, silolike in appearance, which may be vacuum chambers for casting large solid propellant rocket motors. The diameters of these cylindrical structures vary from approximately 30 to 40 feet. At one end of each of the possible casting facilities is a large oval revetment containing either a very large horizontal tank or a long, low, narrow building. The tank or building is connected to the casting facility by a pipeline or conveyer system in each case. A perspective drawing of one of the possible casting facilities (the 2 are practically identical) is presented on Figure 6.

When first seen on photography of [redacted] 25X1D
[redacted] the probable solid propellants production area was under construction. 25X1D
Continuing construction observed in [redacted] included the 2 possible casting facilities. Several storage-type buildings were added to the area during [redacted] 25X1D
[redacted] construction was essentially complete. Only 2 new structures have been added 25X1D
[redacted] 25X1D

The chronological development observed at the facilities discussed in this report permits speculation that the builders planned for the production area, the test facility, and at least one group of offset buildings to reach completion more or less concurrently. However, the test facility may have been partially operational as early as [redacted] whereas the production facilities apparently were not completed until [redacted] Continued construction activity in the test facility (the 2 revetted structures, steamlines, and possible railroad spurs under construction) in late [redacted] suggests that the test facility may not yet be fully operational. 25X1D 25X1D 25X1D

One of the 2 groups of offset buildings (item 6) was apparently the last item to be started, but its completion was only slightly later than other facilities in the probable production area. This suggests that a functional relationship may exist between the offset buildings, the other buildings in the probable production area, and the test facilities. The unusual configuration of the offset buildings suggests that their purpose is the temperature conditioning of solid propellants; the offset sections of these structures would permit the maintenance of several different temperatures simultaneously and would minimize the fire hazard.

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[redacted] 25X1
25X1D

REFERENCES

[redacted]

MAPS OR CHARTS

SAC. US Air Target Chart, Series 200, Sheet 0159-23HL, 2d ed, May 63, scale 1:200,000 (SECRET)

DOCUMENTS

1. NPIC. R-251/63, *Probable Static Test Facility, Krasnoyarsk, USSR,* Oct 63 (TOP [redacted] 25X1

2. NPIC. R-422/64, *Rocket Engine Test Facility, Krasnoyarsk, USSR, April 1964,* Jun 64 (TOP SECRET [redacted] 25X1

RELATED DOCUMENT

CIA. PIR-17/63, *Probable Solid Propellants Testing Facilities and Associated Explosives Plants in the USSR,* Dec 63 (TOP SECRET [redacted] 25X1

REQUIREMENT

CIA. C-RR4-81,679

NPIC PROJECT

N-863/64 (partial answer)

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